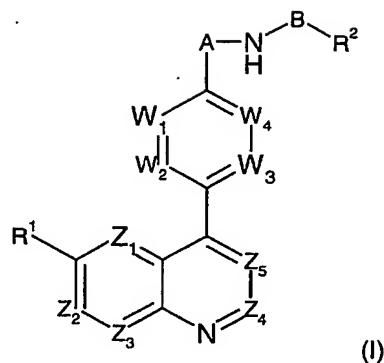


What is claimed is:

1. A compound of formula (I):

5



wherein:

- one of  $Z_1$ ,  $Z_2$ ,  $Z_3$ ,  $Z_4$  and  $Z_5$  is N, one is  $CR^{1a}$  and the remainder are CH , or
- 10 one or two of  $Z_1$ ,  $Z_2$ ,  $Z_3$ ,  $Z_4$  and  $Z_5$  are independently  $CR^{1a}$  and the remainder are CH;
- 15  $R^1$  and  $R^{1a}$  are independently hydrogen; hydroxy; ( $C_{1-6}$ )alkoxy unsubstituted or substituted by ( $C_{1-6}$ )alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two ( $C_{1-6}$ )alkyl, acyl or ( $C_{1-6}$ )alkylsulphonyl groups,  $CONH_2$ , hydroxy, ( $C_{1-6}$ )alkylthio, heterocyclithio, heterocyclloxy, arylthio, aryloxy, acylthio, acyloxy or ( $C_{1-6}$ )alkylsulphonyloxy; ( $C_{1-6}$ )alkoxy-substituted( $C_{1-6}$ )alkyl; halogen; ( $C_{1-6}$ )alkyl; ( $C_{1-6}$ )alkylthio; trifluoromethyl; trifluoromethoxy; nitro; cyano; azido; acyl; acyloxy; acylthio; ( $C_{1-6}$ )alkylsulphonyl; ( $C_{1-6}$ )alkylsulphoxide;
- 20 arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two ( $C_{1-6}$ )alkyl, acyl or ( $C_{1-6}$ )alkylsulphonyl groups;

provided that when  $Z_1$ ,  $Z_2$ ,  $Z_3$ ,  $Z_4$  and  $Z_5$  are  $CR^{1a}$  or CH, then  $R^1$  is not hydrogen;

$W_1, W_2, W_3$  and  $W_4$  are each independently selected from N or CR<sup>3</sup>;

each R<sup>3</sup> is independently selected from:

5 hydrogen; hydroxy; halogen; trifluoromethyl; trifluoromethoxy; cyano; nitro; azido; acyl; acyloxy; acylthio; amino, mono- and di-(C<sub>1-6</sub>)alkylamino; and substituted and unsubstituted (C<sub>1-6</sub>)alkoxy, (C<sub>1-6</sub>)alkyl, (C<sub>3-7</sub>)cycloalkyl, aminocarbonyl, (C<sub>1-6</sub>)alkylthio, (C<sub>1-6</sub>)alkylsulphonyl, and (C<sub>1-6</sub>)alkylsulphoxide;

10 A is (CRR)<sub>n</sub>;

B is (CRR)<sub>m</sub>, C=O, or SO<sub>2</sub>;

n is 1 or 2;

m is 1 or 2

provided that when n is 1, m is 2; when n is 2, m is 1; and when B is C=O or SO<sub>2</sub>

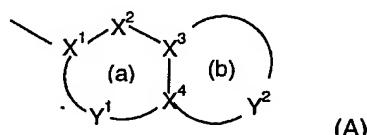
15 then n is 2;

each R is independently selected from

hydrogen; halogen; trifluoromethyl; trifluoromethoxy; cyano; nitro; azido; acyl; acyloxy; acylthio; amino, mono- and di-(C<sub>1-6</sub>)alkylamino; and substituted and

20 unsubstituted (C<sub>1-6</sub>)alkoxy, (C<sub>1-6</sub>)alkyl, (C<sub>3-7</sub>)cycloalkyl, aminocarbonyl, (C<sub>1-6</sub>)alkylthio, (C<sub>1-6</sub>)alkylsulphonyl, and (C<sub>1-6</sub>)alkylsulphoxide;

R<sup>2</sup> is a substituted or unsubstituted bicyclic carbocyclic or heterocyclic ring system of formula (A):



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containing up to four heteroatoms in each ring in which

ring (a) is aromatic and ring (b) is aromatic or non-aromatic;

X<sup>1</sup> is C;

X<sup>2</sup> is N, NR<sup>6</sup>, O, S(O)x, CO, CR<sup>4</sup> or CR<sup>4</sup>R<sup>5</sup>;

30 X<sup>3</sup> and X<sup>4</sup> are each independently N or C;

$Y^1$  is a 1 to 2 atom linker group each atom of which is independently selected from N and CR<sup>4</sup>;

$Y^2$  is a 2 to 6 atom linker group, each atom of  $Y^2$  being independently selected from N, NR<sup>6</sup>, O, S(O)x, CO, CR<sup>4</sup> and CR<sup>4</sup>R<sup>5</sup>;

5

each R<sup>4</sup> and R<sup>5</sup> is independently selected from: hydrogen; (C<sub>1-4</sub>)alkylthio; halo; carboxy(C<sub>1-4</sub>)alkyl; halo(C<sub>1-4</sub>)alkoxy; halo(C<sub>1-4</sub>)alkyl; (C<sub>1-4</sub>)alkyl; (C<sub>2-4</sub>)alkenyl; (C<sub>1-4</sub>)alkoxycarbonyl; formyl; (C<sub>1-4</sub>)alkylcarbonyl; (C<sub>2-4</sub>)alkenyloxycarbonyl; (C<sub>2-4</sub>)alkenylcarbonyl; (C<sub>1-4</sub>)alkylcarbonyloxy; (C<sub>1-4</sub>)alkoxycarbonyl(C<sub>1-4</sub>)alkyl;

10 hydroxy; hydroxy(C<sub>1-4</sub>)alkyl; mercapto(C<sub>1-4</sub>)alkyl; (C<sub>1-4</sub>)alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl is optionally substituted by (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl, (C<sub>2-4</sub>)alkenylcarbonyl, (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl and optionally further substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; (C<sub>2-6</sub>)alkenyl;

15 (C<sub>1-4</sub>)alkylsulphonyl; (C<sub>2-4</sub>)alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally mono- or di-substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; aryl; aryl(C<sub>1-4</sub>)alkyl; aryl(C<sub>1-4</sub>)alkoxy; or R<sup>4</sup> and R<sup>5</sup> may together represent oxo;

each R<sup>6</sup> is independently hydrogen; trifluoromethyl; (C<sub>1-4</sub>)alkyl unsubstituted or  
20 substituted by hydroxy, (C<sub>1-6</sub>)alkoxy, (C<sub>1-6</sub>)alkylthio, halo or trifluoromethyl; (C<sub>2-4</sub>)alkenyl; aryl; aryl(C<sub>1-4</sub>)alkyl; arylcarbonyl; heteroarylcarbonyl; (C<sub>1-4</sub>)alkoxycarbonyl; (C<sub>1-4</sub>)alkylcarbonyl; formyl; (C<sub>1-6</sub>)alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C<sub>1-4</sub>)alkoxycarbonyl, (C<sub>1-4</sub>)alkylcarbonyl, (C<sub>2-4</sub>)alkenyloxycarbonyl,  
25 (C<sub>2-4</sub>)alkenylcarbonyl, (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl and optionally further substituted by (C<sub>1-4</sub>)alkyl or (C<sub>2-4</sub>)alkenyl; and each x is independently 0, 1, or 2; or a pharmaceutically acceptable salt thereof.

2. A compound according to claim 1 wherein  $Z_5$  is CH or N,  $Z_3$  is CH or CF and  $Z_1$ ,  $Z_2$  and  $Z_4$  are each CH, or  $Z_1$  is N,  $Z_3$  is CH or CF and  $Z_2$ ,  $Z_4$  and  $Z_5$  are each CH.

5 3. A compound according to claim 1 wherein  $R^1$  is methoxy and  $R^{1a}$  is H or when  $Z_3$  is  $CR^{1a}$  it may be C-F.

4. A compound according to claim 1 wherein:

a)  $W_1$ - $W_4$  are independently  $CR^3$ ;

10 b)  $W_1$ ,  $W_3$  and  $W_4$  are N and  $W_2$  is  $CR^3$ ;

c)  $W_2$  is N and  $W_1$ ,  $W_3$  and  $W_4$  are independently  $CR^3$ ;

d)  $W_3$  is N and  $W_1$ ,  $W_2$  and  $W_4$  are independently  $CR^3$ ; or

e)  $W_4$  is N and  $W_1$ - $W_3$  are independently  $CR^3$ .

15 5. A compound according to claim 1 wherein  $R^3$  is independently selected from hydrogen, substituted and unsubstituted ( $C_{1-6}$ )alkoxy, and  $NH_2$ .

6. A compound according to claim 1 wherein R is independently selected from hydrogen, substituted and unsubstituted ( $C_{1-6}$ )alkyl,  $CONH_2$ ,  $COOH$ , hydroxy,

20 halogen, and substituted and unsubstituted ( $C_{1-6}$ )alkoxy.

7. A compound according to claim 1 wherein in the heterocyclic ring (A),  $Y^2$  has 3-5 atoms including  $NR^6$ , O or S bonded to  $X^4$  and  $NHCO$  bonded via N to  $X^3$ , or O or NH bonded to  $X^3$ .

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8. A compound according to claim 1 wherein  $R^2$  is selected from  
 $4H$ -benzo[1,4]thiazin-3-one-6-yl,  
 $4H$ -pyrido[3,2-*b*][1,4]thiazin-3-one-6-yl,  
 $4H$ -pyrido[3,2-*b*][1,4]oxazin-3-one-6-yl,

30 1,2,3,4-tetrahydro-[1,8]naphthyridine-7-yl,  
 $1H$ -pyrido[3,2-*b*][1,4]thiazin-2-one-7-yl,

4*H*-benzo[1,4]oxazin-3-one-6-yl, and  
6-fluoro-2,3-dihydrobenzo[1,4]dioxine-7-yl.

9. A compound according to claim 1 which is:

5        6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4*H*-  
benzo[1,4]thiazin-3-one;  
      6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4*H*-  
pyrido[3,2-*b*][1,4]thiazin-3-one;  
      6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-4*H*-  
10      pyrido[3,2-*b*][1,4]oxazin-3-one;  
      3-Oxo-3,4-dihydro-2*H*-benzo[1,4]thiazine-6-sulfonic acid {2-[4-(6-methoxy-  
[1,5]naphthyridin-4-yl)phenyl]ethyl}amide;  
      {2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethyl} (5,6,7,8-  
tetrahydro[1,8]naphthyridin-2-yl)methyl)amine;  
15      6-([4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]methyl)-4*H*-  
benzo[1,4]thiazin-3-one;  
      7-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)phenyl]ethylamino}methyl)-1*H*-  
pyrido[3,2-*b*][1,4]thiazin-2-one;  
      6-[2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]ethyl]-4*H*-  
20      benzo[1,4]oxazin-3-one;  
      6-[2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)benzylamino]ethyl]-4*H*-  
benzo[1,4]thiazin-3-one;  
      (7-Fluoro-2,3-dihydrobenzo[1,4]dioxin-6-ylmethyl){2-[6-(6-  
methoxy[1,5]naphthyridin-4-yl)[1,2,4]triazin-3-yl]ethyl}amine;  
25      6-({2-[4-(6-Methoxyquinolin-4-yl)phenyl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;  
      6-({2-[4-(6,8-difluoroquinolin-4-yl)phenyl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;  
      6-({2-[4-(8-Fluoro-6-methoxyquinolin-4-yl)phenyl]ethylamino}methyl)-4*H*-  
30      pyrido[3,2-*b*][1,4]thiazin-3-one;  
      6-({2-[6-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-3-yl]ethylamino}methyl)-  
4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;  
      6-({2-[5-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-2-yl]ethylamino}methyl)-  
4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;  
35      6-({2-[6-(6-methoxy-[1,5]naphthyridin-4-yl)pyridin-3-yl]ethylamino}methyl)-  
4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

*N*-(2,3-dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)-2-{6-[6-(methyloxy)-1,5-naphthyridin-4-yl]-3-pyridinyl}ethanamine;

*N*-(2,3-dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)-2-{5-[6-(methyloxy)-1,5-naphthyridin-4-yl]-2-pyridinyl}ethanamine;

5       *N*-(2-{6-[6-(methyloxy)-1,5-naphthyridin-4-yl]-3-pyridinyl}ethyl)-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazine-6-carboxamide; and

*N*-(2-{5-[6-(methyloxy)-1,5-naphthyridin-4-yl]-2-pyridinyl}ethyl)-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazine-6-carboxamide;

or a pharmaceutically acceptable salt thereof.

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10.     A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier.

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11.     A method of treating bacterial infections in mammals which comprises the administration to a mammal in need thereof an effective amount of a compound according to claim 1.